

distillation point no greater than 210 °F, and a paraffin content greater than 65 volume percent;

(c) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point less than 193 °F, and an olefin content less than 10 volume percent;

(d) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and an olefin content less than 1 volume percent; and

(e) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, a 50% D-86 distillation point no greater than 210° F., an olefin content less than 10 vol.%, a 90% D-86 distillation point less than 300° F., and an octane value of at least 87;

and thereafter

(2) combusting the unleaded gasoline in said engine;

(3) introducing at least some of the resultant engine exhaust emissions into the catalytic converter; and

(4) discharging emissions from the catalytic converter to the atmosphere.

182. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (a).

183. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (b).

184. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (c).

185. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (d).

186. A method as defined in claim 182, 183, 184, or 185 wherein the 90% D-86 distillation point of the gasoline in step (1) is no greater than 315° F.

187. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (e).

188. A method as defined in claim 187 wherein the unleaded gasoline in step (1) has a paraffin content greater than 72 volume percent.

189. A method as defined in claim 188 wherein the unleaded gasoline in step (1) contains less than 6 volume percent olefins.

190. A method as defined in claim 182, 183, 184, 185, 187, or 189 wherein said unleaded gasoline in step (1) contains greater than 75 volume percent paraffins.

191. A method as defined in claim 187 wherein said unleaded gasoline in step (1) has an olefin content less than 4 volume percent and said unleaded gasoline in step (1) contains greater than 75 volume percent paraffins.

192. A method as defined in claim 182, 184, 187, 189, or 191 wherein said unleaded gasoline in step (1) has a 10% D-86 distillation point below 140° F.

193. A method as defined in claim 192 resulting in reductions of each of NO<sub>x</sub>, CO, and unburned hydrocarbons.

194. A method as defined in claim 193 resulting in reductions by at least 10% of any of NO<sub>x</sub>, CO, and unburned

hydrocarbons.

195. A method for operating an automotive vehicle having a spark-induced, internal combustion engine and a catalytic converter for treating emissions from said engine, the method comprising:

(1) introducing into the engine an unleaded, oxygenated gasoline selected from the group consisting of:

(a) unleaded, oxygenated gasolines having a Reid Vapor Pressure less than 7.5 psi, an octane value of at least 87, a 10% D-86 distillation point no greater than 158 °F, a 50% D-86 distillation point no greater than 215 °F, a 90% D-86 distillation point no greater than 315 °F., a paraffin content greater than 65 volume percent, and an olefin content less than 10 volume percent;

(b) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., a paraffin content greater than 65 volume percent, and a 50% D-86 distillation point no greater than 215 °F.;

(c) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., and a paraffin content greater than 70 volume percent; and

(d) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., a 50% D-86 distillation point no greater than 215 °F., an olefin content less than 10 volume percent, and oxygenates present in a total oxygen concentration no greater than the equivalent provided by about 14.9 volume percent methyl tertiary butyl ether;

(2) combusting said unleaded gasoline in said engine to yield exhaust emissions, which, after treatment in the catalytic converter, have, in comparison to combusting fuel A/O AVE, a

reduced amount of at least one pollutant selected from the group consisting of NOx, CO, and unburned hydrocarbons; and

(3) passing emissions from said combustor in said engine through the catalytic converter.

196. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (a).

197. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (b).

198. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (c).

199. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (d).

200. A method as defined in claim 182, 183, 187, 189, 191, 197, 198, or 199, resulting in reductions in each of unburned hydrocarbons, CO, and NOx.

201. A method as defined in claim 196 or 199 wherein the paraffin content of the unleaded gasoline in step (1) is greater than 72 volume percent.

202. A method as defined in claim 201 wherein the olefin content of the unleaded, oxygenated gasoline of step (1) is less than 6 volume percent and the method results in reductions in each of NOx, CO, and unburned hydrocarbons.

203. A method as defined in claim 196, 197, or 199 wherein the paraffin content is greater than 75 volume percent.

204. A method as defined in claim 203 resulting in reductions in each of NOx, CO, and unburned hydrocarbons, with the reductions of at least one of NOx, CO, and unburned hydrocarbons being at least 10%.

205. A method as defined in claim 204 wherein the olefin content is less than 6 volume percent.

206. A method as defined in claim 182, 183, 184, 187, 196, 197, or 199 wherein the gasoline in step (1) contains one or more oxygenates in a total oxygen concentration between the equivalent of about 10.1 and 14.9 vol.% methyl tertiary butyl ether.

207. A method as defined in claim 206 wherein the unleaded, oxygenated gasoline in step (1) contains more than 75 volume percent paraffins.

208. A method as defined in claim 207 wherein said unleaded, oxygenated gasoline in step (1) has a 10% D86 distillation point below 140° F., and the method results in reductions in each of NOx, CO, and unburned hydrocarbons.

209. A method as defined in claim 183, 187, 196, or 199 wherein the gasoline in step (1) contains greater than 72 volume percent paraffins and one or more oxygenates in a total oxygen concentration between the equivalent of about 10.1 and 14.9 vol.% methyl tertiary butyl ether.

210. A method as defined in claim 209 resulting in reductions in each of NOx, CO, and unburned hydrocarbons.

211. A method as defined in claim 209 wherein the

unleaded, oxygenated gasoline in step (1) has an olefin content less than 6 volume percent and a paraffin content greater than 75 volume percent.

212. A method as defined in claim 211 wherein the unleaded, oxygenated gasoline in step (1) has a 50% D86 distillation point less than 200° F.

213. A method as defined in claim 182, 183, 185, 187, 188, 191, 196, 197, 198, or 199 wherein the gasoline in step (1) has a 50% D86 distillation point less than 200° F. and a 10% D86 distillation point less than 140° F.

214. A method as defined in claim 213 resulting in reductions in each of NOx, CO, and unburned hydrocarbons.

215. A method as defined in claim 214 resulting in reductions by at least 10% of any of NOx, CO, and unburned hydrocarbons.

216. A method as defined in claim 182, 183, 187, 188, 189, or 199 wherein the gasoline has a 50% D-86 distillation point less than 200 °F.

217. A method as defined in claim 182, 183, 185, 187, 188, 191, 196, 197, 198, or 199 resulting in reductions in each of NOx, CO, and unburned hydrocarbons.

218. A method as defined in claim 217 resulting in reductions by at least 10% of any of NOx, CO, and unburned hydrocarbons.

219. A method as defined in claim 218 wherein said

catalytic converter is a three-way catalytic converter.

220. A method as defined in claim 182, 183, 185, 187, 188, 189, 191, 196, 197, 198, or 199 wherein said catalytic converter is a three-way catalytic converter.

221. A method as defined in claim 190 wherein said catalytic converter is a three-way catalytic converter.

222. A method as defined in claim 194 wherein said catalytic converter is a three-way catalytic converter.

223. A method as defined in claim 200 wherein said catalytic converter is a three-way catalytic converter.

224. A method as defined in claim 205 wherein said catalytic converter is a three-way catalytic converter.

225. A method as defined in claim 213 wherein said catalytic converter is a three-way catalytic converter.

226. A method as defined in claim 215 wherein said catalytic converter is a three-way catalytic converter.

227. A method as defined in claim 216 wherein said catalytic converter is a three-way catalytic converter.

228. A method as defined in claim 217 wherein said catalytic converter is a three-way catalytic converter.